



Trainer Guide

Age Adjusted Plotting on Growth Charts

&

Risk Assessment for Preterm Infants

Appendix

Accurate Weighting and Measuring Procedures

RD Wizard Changes with client Services 4.4

HRCP History & Report

Reference and Resource List

Supplement Materials

PowerPoints:

- Age Adjusted Plotting on Growth Charts & Risk Assessment for Preterm Infants
- Preterm Infants: Growth Assessment and Feeding by Joan Zerzan, MS, RD, CD – Abbreviated Version

Client Services 4.4 Release Notes

Draft Policy & Procedure Manual Chapters:

- Chapter 14 - Nutrition Risk Factors
- Chapter 9 - Anthropometrics



4.4 and More...

Learning Objectives:

By the end of this session, you will be able to:

- State normal expectations of growth using the CDC growth chart for a full term infant.
- Contrast one difference between corrected age and adjusted age for preterm infants.
- Identify two Client Services screens where adjusted age is documented for the preterm infant.
- Describe how and when growth charts are plotted with an age adjustment in Client Services.
- Distinguish at least three new risk changes and when to apply specific risk(s) to the individual.
- State two health risks and concerns associated with preterm infants.
- Describe a normal growth pattern and expectation for a preterm infant.
- Demonstrate client centered communication about a child's growth to the caregiver.
- Apply at least one feeding recommendation for the preterm infant.
- Develop an awareness of how caregivers might perceive messages about their child's growth and feeding.
- Indicate three other "bonus" changes in Client Services software not related to preterm infants or the racial/ethnic tab.



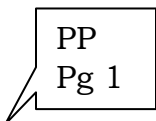
4.4 and More...

Overview

Provide an overview of the following steps prior to training on the age adjusted plotting on growth charts and risk assessment for preterm infants:

- 1) Review the section below: Background: Why Change Plotting of Growth Charts for Preterm Infants?
- 2) Examine terminology related to age adjusted plotting and preterm infants.
- 3) Review the 2000 CDC growth charts and interpretation of plotted measurements for full term infant.
- 4) Refer to the summary handout: "Accurate Weighing and Measuring Procedures" in the Appendix and/or review actual policy in Chapter 9 – Anthropometrics chapter of the WIC Manual.

Tips:

- The call out symbol  may provide the following indication:
 - a PowerPoint (PP) slide that correlates with the information in the training materials.
 - a page number associated with the Trainee's handout **The Trainer Guide page numbers will be different than the Trainee handout page numbers.**
- The page numbers on the bottom, right corner of the PowerPoint slide also match the page numbers in the Trainee handout.
- The Client Services version discussed in this training is Version 4.4 unless otherwise specified in the materials.



Client Services Growth Charts

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Background: Why Change Plotting of Growth Charts for Preterm Infants?

At the national level we have a workgroup of state and federal nutritionists who determine the risk factors we use in WIC. This group is called the Risk Identification and Selection Collaborative (RISC). As new research is conducted and findings revealed, the workgroup assesses the need for changes to WIC nutrition risks.

The Center for Disease Control and Prevention (CDC) completed a study in 2003 of growth references for Very Low Birth Weight (VLBW) infants. As a result of the study, RISC provided protocols to follow in WIC; we have a few additional nutrition risk factors and we will now be plotting the 2000 CDC growth charts using the adjusted age for a preterm infant (i.e. an infant born at or before 37 weeks gestation), in addition to plotting for actual age.

PP

A more accurate and consistent assessment of growth, feeding skills and developmental skills will be achieved by:

- Using new risk factors based on adjusted age, i.e. modified definitions of certain anthropometric risk criteria, and
- Plotting measurements on the 2000 CDC growth charts using adjusted age to ensure consistency and accuracy of growth assessment.



4.4 and More...

Chronological Age versus Adjusted Age

Trainer: Have staff take turns reading the definitions below.

In order to discuss the chronological age versus the adjusted age of the infant, we need to define the following terms:

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Full term pregnancy: A full term pregnancy is estimated to be 40 weeks from the mother's last menstrual period (38-42 weeks gestation is considered full term).

Preterm infant: This is an infant who was born at 37 weeks or less, or three weeks early from the estimated due date.

Assessment of growth, feeding skills and developmental skills for preterm infant should be based on the client's adjusted age. Let's look at the chronological age versus the adjusted age:

PP

Chronological age: Sometimes known as actual age, is a term used to indicate the age from the day the child was born, i.e.: An infant was born on January 1st, the chronological age of the infant today, January 8th, is one week.

Adjusted age: Also known as corrected age, is based on the age the infant would be if the pregnancy had actually gone to term (i.e. the mother delivered the baby near the estimated due date). If the infant was born at 37 weeks of gestation, 37 weeks is subtracted from 40 weeks, which means the infant was three weeks early.

In WA WIC, we will be using the term "adjusted age" instead of corrected age, because adjusted age more accurately describes what we are doing with the age of the preterm infant. We are not correcting for a mistake, we are adjusting the infants' age for how many weeks early the infant was born.



4.4 and More...

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2000 CDC Growth Chart Facts

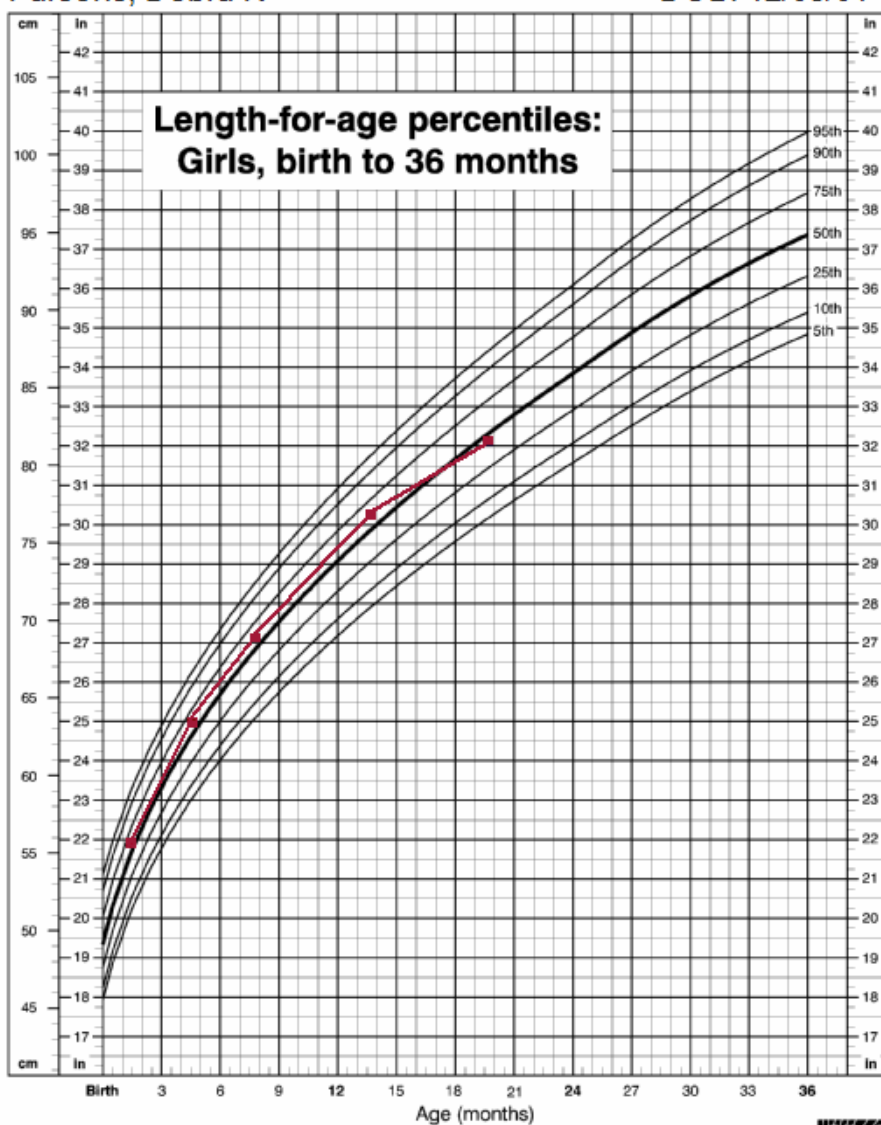
Before discussing the growth charts for the preterm infant, let's briefly review how to interpret the growth charts and the growth expectations for a full term infant. Let's view Debra's growth chart.



Site: Emerald CHD

Parsons, Debra K

DOB: 12/08/01



Published May 30, 2000.
SOURCE: Developed by the National Center for Health Statistics in collaboration with
the National Center for Chronic Disease Prevention and Health Promotion (2000).



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4.4 and More...

Facts About the 2000 CDC Growth Charts

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The 2000 CDC growth charts are used to plot and assess length for age, weight for age and head circumference for age for the infant or child up to 3 years of age (or as long as length measurements are taken for the child). Weight for length is also plotted on the 2000 CDC growth charts, however, we will not be discussing this growth chart today because plotting of this growth chart will not change.

PP

The growth charts read as percentiles, the solid lines are the 5th, 10th, 25th, 50th, 75th, 90th and 95th percentiles.

The spaces between the lines are called channels (deviations). The majority of children grow within the 25th-75th percentiles.

Growth between the 10th and 90th percentiles is considered normal, although, kids that plot at or below the 10th percentile are at risk of becoming underweight and kids that plot at or above the 90th percentile are at risk of overfeeding.

PP

Remember what is most important when assessing a child's growth is reviewing the pattern of growth, or many plotted measurements over time. One measurement plot doesn't tell us very much. Many plotted measurements, show whether the child's pattern of growth looks appropriate or whether there may be concerns.



4.4 and More...

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New Client Services functions:

If you have ever double-clicked on the growth chart to expand it, and enlarged it so much that there isn't anything but a blank screen left to view, then you will like the new functions on the menu bar. There are three new tool bar icons available for zooming in and out when viewing the graph and they remain usable at all times while viewing the graph.

New Icons



Zoom In

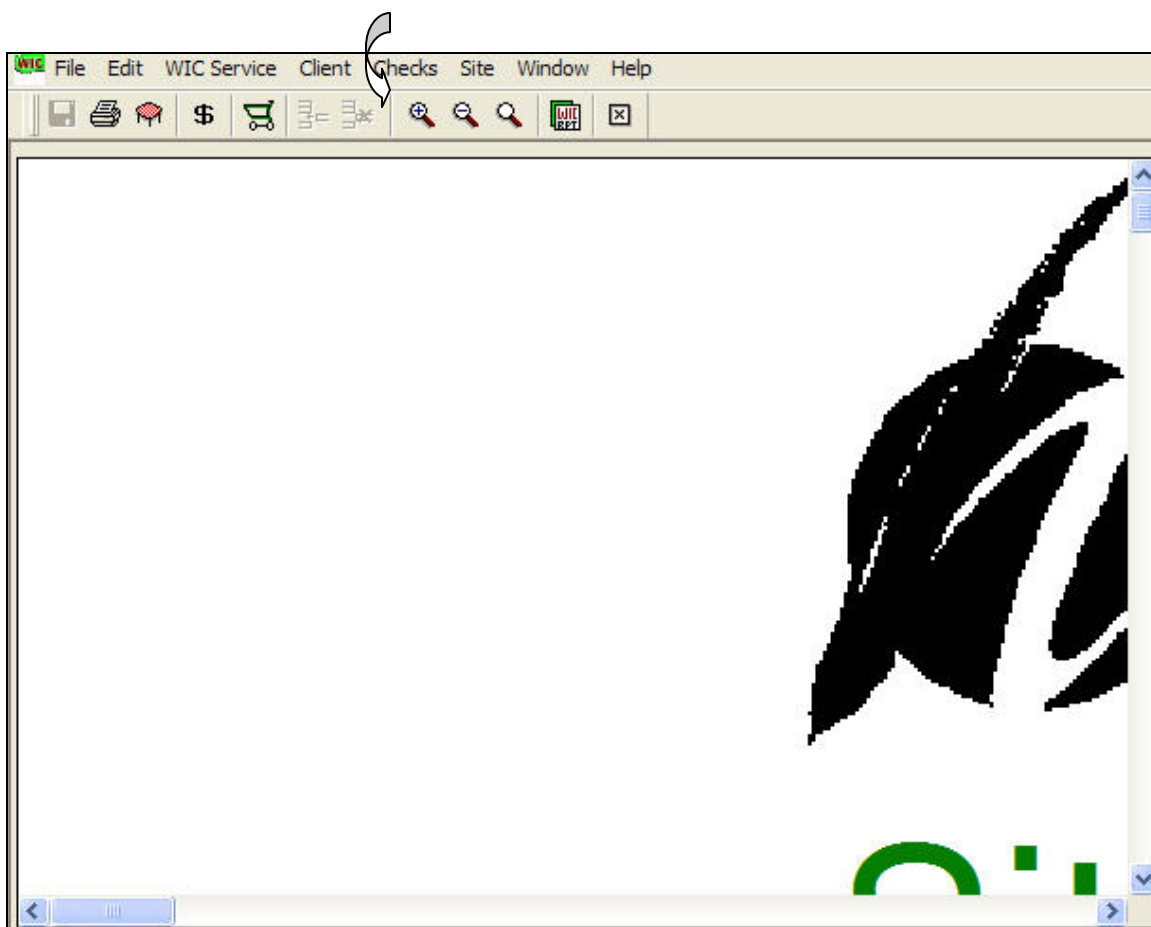


Zoom Out



Reset

Example of zooming in too far on the growth chart





4.4 and More...

- The growth charts and prenatal graphs can now be printed by choosing:
 - File on the menu bar, and picking the "Print" selection,
 - the Print icon, or
 - the Print button on the Measures tab.

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Gestational Age Field on the Custom tab

There is a Gestational Age field on the Custom tab for the number of weeks gestation to be entered for the infant and child.

It is critical to fill in the Gestational Age field for infants and children up to 2 years of age, in order to have:

1. Growth charts plotted using both actual and adjusted ages.
2. Preterm infant and child nutrition risks assigned.

Since the computer will not require you to complete the Gestational Age field, it is important to be thorough in collecting this information.

Once your clinic has Client Services 4.4, any preterm client who has the Gestational Age field completed will have growth charts plotted using both actual and adjusted ages and preterm nutrition risks available (when the Identify Nutrition Risks button is pushed).

Infant Custom tab

Birth Length	16 in	0 8ths	Birth Weight	4 lb	4 oz	Gestational Age	33 wks
Total Preg.Wt. Gain	40	On WIC During Preg?	WA	Mom's ID	115014311		
Breastfed	Never	Date BF Stopped	00/00/0000				
		Date Formula/Milk Introduced	08/12/2006				
		Date Solids Introduced	00/00/0000				
Infant Medical Provider		Dr. Allcome					



4.4 and More...

Child Custom tab

Birth Length	20 in	0 8ths	Birth Weight	8 lb	9 oz	Gestational Age	41 wks
Breastfed	Stopped		Date BF Stopped	05/29/2006			

Adjusted Age Calculated based on Gestational Age

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Client Services will automatically calculate the adjusted age based on the number entered into the Gestational Age field.

If the client is a foster child and the caregiver does not know the gestational age of the infant/child, then leave the field blank and possibly as time goes by, you will be able to obtain that information from the health care provider. Or if you learn from a health care provider or another source that the child is preterm, manually select the "Premature \leq 37 weeks of age" risk.

When you *recertify* an infant to a child, the gestational age will carry forward if it was entered into the infant Custom tab.

Remember for every new child or existing child less than 2 years of age, it will also be important to enter the gestational age on the child's Custom tab in order to get preterm growth plotting and/or preterm nutrition risks.

Obtaining Gestational Age Information

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How do you find out the gestational age of the infant/child?

To obtain information about the number of weeks gestation:

- the caregiver can self-report, or
- staff may obtain information from the medical provider.

A question to ask the caregiver when they are self-reporting the gestational age of the infant is **"Compared to your due date, was your baby born on time?"** To increase the accuracy of this response, reflect back to the caregiver what you heard: "So your baby was 3 weeks early." Caregivers may also report this information by



4.4 and More...

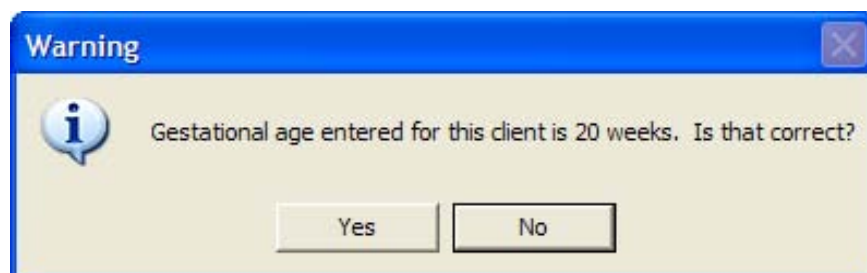
giving you the number of weeks gestation, "my baby was born at 37 weeks gestation".

In Client Services, if a value of less than 24 weeks or greater than 43 weeks is entered into the Gestational Age field on the Custom tab, a pop-up message will alert you that the number of weeks entered into the Custom tab is out of the normal range.

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The accuracy of the number of weeks gestation is just as important as accurate anthropometric measurements for assessing the preterm infant's growth, development and feeding.

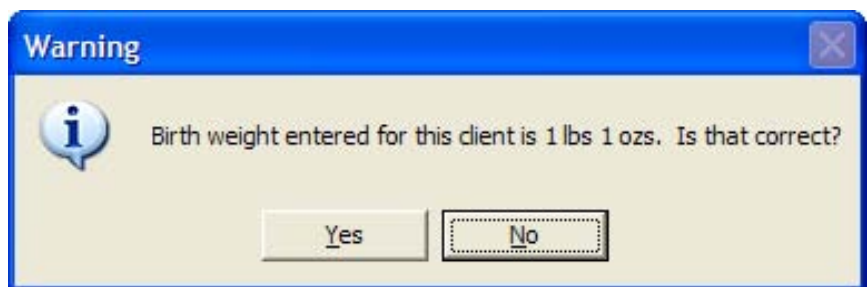
If the number of weeks entered is correct, press the "yes" button within the pop-up message box and continue on with the assessment.



Birth Weight Entered on the Custom Tab

Another cue to help increase accuracy is a pop-up message for birth weight entered on the Custom tab for an infant or child. If the birth weight is out of the expected range for the number of weeks of gestation, a pop up box will appear asking you to verify that the birth weight entered is correct.

PP





4.4 and More...

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Calculation for Gestational Age

Gestational age is calculated by subtracting the number of weeks premature from 40 weeks (which is full term for pregnancy). Refer to the table on the next page.

Example:

40 weeks – 7 weeks = 33 weeks
(full term) (weeks early) (gestational age)



4.4 and More...

Calculating Gestational Age

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$$40 \text{ weeks} - \text{Weeks Early} = \text{Gestational Age}$$

Weeks Early	Gestational Age
1	39 weeks
2	38 weeks
3	37 weeks
4	36 weeks
5	35 weeks
6	34 weeks
7	33 weeks
8	32 weeks
9	31 weeks
10	30 weeks
11	29 weeks
12	28 weeks
13	27 weeks
14	26 weeks
15	25 weeks
16	24 weeks
17	23 weeks
18	22 weeks
19	21 weeks



4.4 and More...

Let's review a couple of client scenarios:

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Scenario 1

Cassie is in your office today with her daughter, Jackie, for a New Cert. To complete the field for gestational age on the Custom tab, you ask Cassie, "Cassie, compared to your due date, was Jackie born on time?" Cassie tells you she was having some medical difficulties with her pregnancy and Jackie was born 4 weeks early.

With the table on the previous page, use the equation and figure out the weeks gestation. How many weeks is a normal pregnancy? (40)

What is Jackie's gestational age?

40 weeks (full term pregnancy) – 4 weeks (early) = 36 weeks
Gestational Age

To make sure you have accurate information, restate what you heard, "So Jackie was born at 36 weeks gestation, or four weeks early." After affirmation, enter the weeks into the gestational age field on the Custom tab.

At this point Client Services will do the rest of the calculation to find Jackie's adjusted age.



4.4 and More...

Scenario 2

Cassie and Jackie are in the office today, approximately 6 months after Jackie was born.

Let's take a look at Jackie's Custom tab.

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Custom Tab

CI	Income Documentation	Measures	Assess Risk	Topics	Handouts	Referrals	Basic Contact	Notes	Finish
Client <input type="text" value="Galvez, Jackie N"/>		DOB <input type="text" value="04/08/2006"/>		Category <input type="text" value="I"/>					
Caregiver <input type="text" value="Byrd, Cassie A"/>		Age <input type="text" value="0"/> Yrs <input type="text" value="6"/> Mos <input type="text" value="5"/> Days		Gender <input type="text" value="F"/>					
		Adjusted Age <input type="text" value="0"/> Yrs <input type="text" value="5"/> Mos <input type="text" value="7"/> Days							
Date Service Provided <input type="text" value="10/13/2006"/>									
Birth Length <input type="text" value="19"/> in <input type="text" value="7"/> 8ths		Birth Weight <input type="text" value="6"/> lb <input type="text" value="14"/> oz		Gestational Age <input type="text" value="36"/> wks					
Total Preg.Wt. Gain <input type="text" value="40"/>		On WIC During Preg? <input type="text" value="WA"/>		Mom's ID <input type="text" value="115014311"/>					
Breastfed <input type="text" value="Currently"/>		Date BF Stopped <input type="text" value="00/00/0000"/>		Date Formula/Milk Introduced <input type="text" value="00/00/0000"/>					
		Date Solids Introduced <input type="text" value="00/00/0000"/>							
Infant Medical Provider <input type="text" value="Dr. Allcome"/>									

What do you notice about Jackie's Custom tab?

Points to Share:

- Jackie's chronological age is 6 months old
- Jackie's adjusted age is 5 months or 20 weeks old
- The adjusted age is displayed below age (chronological age)
- Both age displays include fields for years, months, and days



4.4 and More...

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Display of the Child's Age

- Adjusted age will display if the child's gestational age is equal to or less than 37 weeks gestation (37 weeks or less being the defined cutoff for premature).
- Adjusted age for preterm infants and children shows on most Client Services screens where age is displayed, with the exception of the Checks screens.
- Both age displays use correct grammar for the year, month and day as appropriate (i.e. if more than one, displays years, mos and days).

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Example below shows 11 days versus 1 day.

Client	Sorensen, Ethan A	DOB	12/30/2004	Category	C
Caregiver	Alexander, Morgan L	Age	1 Yr 9 Mos 11 Days	Gender	M

Client	Drone, Poppy M	DOB	09/10/2005	Category	C
Caregiver	Drone, Yvonne	Age	1 Yr 1 Mo 1 Day	Gender	F

PP

- Age calculated in Client Services is very accurate...to the day!
- Adjusted age will display up to 2 years of age (chronological) for children born preterm.
- Children 2 years and older will continue to have their age displayed in years and months (as in the previous version, Version 4.3).



4.4 and More...

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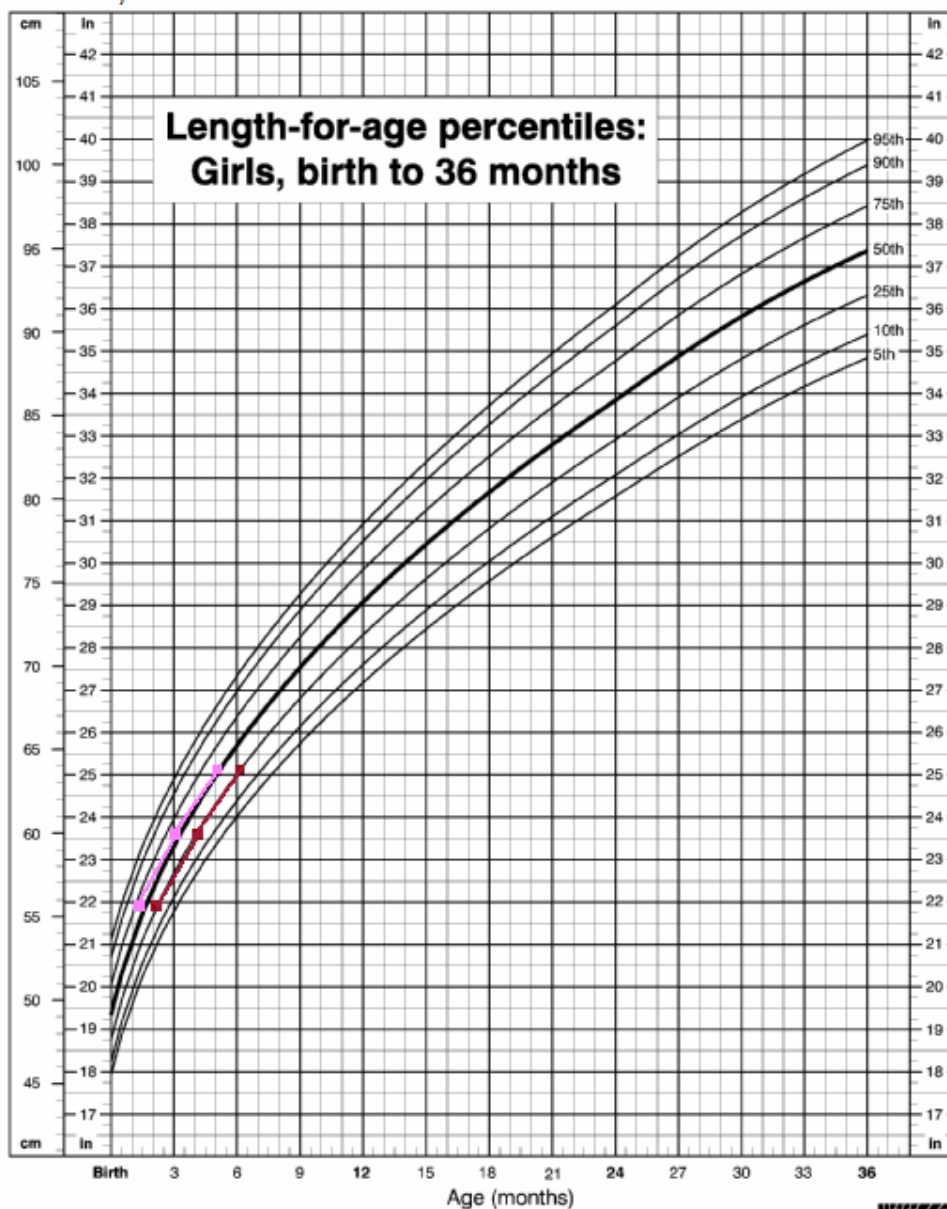
Now let's take a sneak preview of the adjusted age plotted on the growth charts by looking at Jackie's growth chart.



Site: Emerald CHD

Galvez, Jackie N

DOB: 04/08/06



Published May 30, 2000.
SOURCE: Developed by the National Center for Health Statistics in collaboration with
the National Center for Chronic Disease Prevention and Health Promotion (2000).



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4.4 and More...

Points to share:

- Same CDC growth charts used in past versions of Client Services.
- Chronological age plots in red, adjusted age plots in pink for girls
- Adjusted age has a similar curve as chronological age, but moved back 3 wks, 5 days from the chronological age measurement (it looks like the measurement is moved back one month, but Client Services is accurate to the day).

Now let's view Rodika's Custom Tab

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Rodika's Custom Tab

CI	Income Documentation	Measures	Assess Risk	Topics	Handouts	Referrals	Basic Contact	Notes	Finish	
Client	Jensen, Rodika K		DOB	08/26/2006		Category	I			
Caregiver	Jensen, Kailey L		Age	0 Yrs	1 Mo	15 Days	Gender	F		
			Adjusted Age	0 Yrs	0 Mos	-17 Days				
Date Service Provided			10/11/2006							
Birth Length		16 in	0 8ths	Birth Weight		4 lb	2 oz	Gestational Age		31 wks
Total Preg.Wt. Gain		7		On WIC During Preg?		No		Mom's ID		11504511
Breastfed		Never		Date BF Stopped		00/00/0000				
				Date Formula/Milk Introduced		08/26/2006				
				Date Solids Introduced		00/00/0000				
Infant Medical Provider Dr. Allame										

The Adjusted Age for Rodika is -17 days. If you were to look at Rodika's mom's expected due date, Rodika wouldn't have been born for another three weeks. She is being seen in the WIC clinic 17 days before her expected due date.

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Client Services calculates the age of the infant to the day!



4.4 and More...

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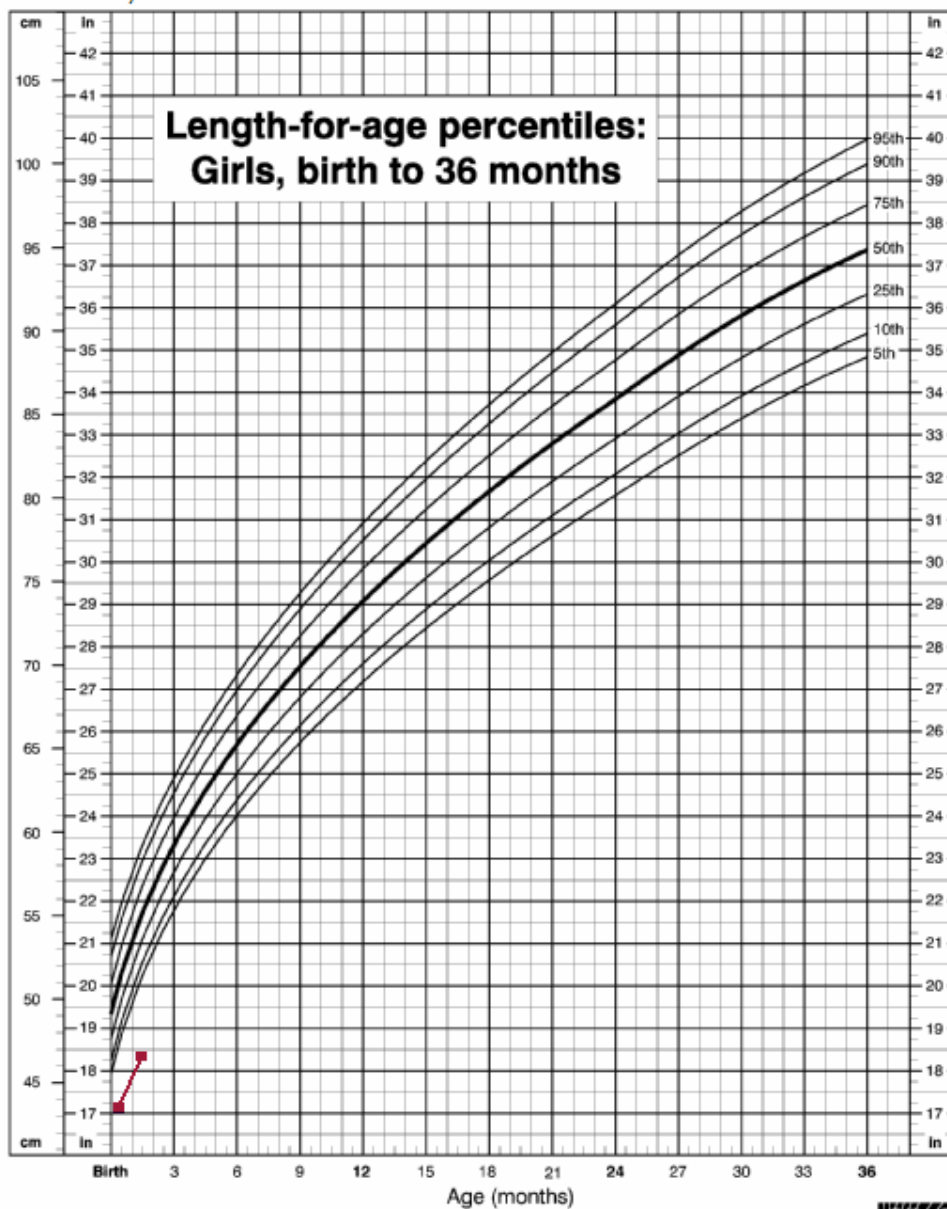
Let's view Rodika's Length/Age Growth Chart



Site: Emerald CHD

Jensen, Rodika K

DOB: 08/26/06



Published May 30, 2000.
SOURCE: Developed by the National Center for Health Statistics in collaboration with
the National Center for Chronic Disease Prevention and Health Promotion (2000).



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4.4 and More...

Points to share:

- Two measurements were taken that are plotted for her chronological age.
- Only the chronological age measurements will plot until the infant has reached their estimated due date. So in Rodika's case, she has another 3 weeks (17 days) before the measurements would be plotted on the growth chart.
- Staff are not required to plot measurements on a paper chart for preterm infants whose chronological age is 3 weeks or less. Staff inform the caregiver that they will weigh and measure the baby in the future, and at that time, the growth chart will be plotted for Rodika.
- Staff have the option to manually plot a preterm growth chart for these infants, but nutrition risks can only be determined using the 2000 CDC growth charts.
- Refer to Preterm Infant Reference and Resource List in the Appendix for more information about preterm growth chart availability.

What questions do you have?

Plotting Measurements using Adjusted Age on the Growth Charts

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Client Services will plot measurements on length/age, weight/age and head circumference/age growth charts using both chronological and adjusted ages:

- only when "Gestational Age" of 37 weeks or less is entered on the Custom tab (for both infant and child).
- plotting for adjusted age begins when the preterm infant reaches their estimated due date.
- for infants and children up to 2 years of age (chronological).

PP

Measurements plotted using adjusted age:

- parallel a similar curve as the measurements plotted for chronological age
- plots in light blue for boys and light pink for girls
- for Length/Age, Weight/Age and Head Circumference/Age (same as plotting measurements using chronological age)



4.4 and More...

Let's take a look at Victoria Bell's Length/Age Growth Chart

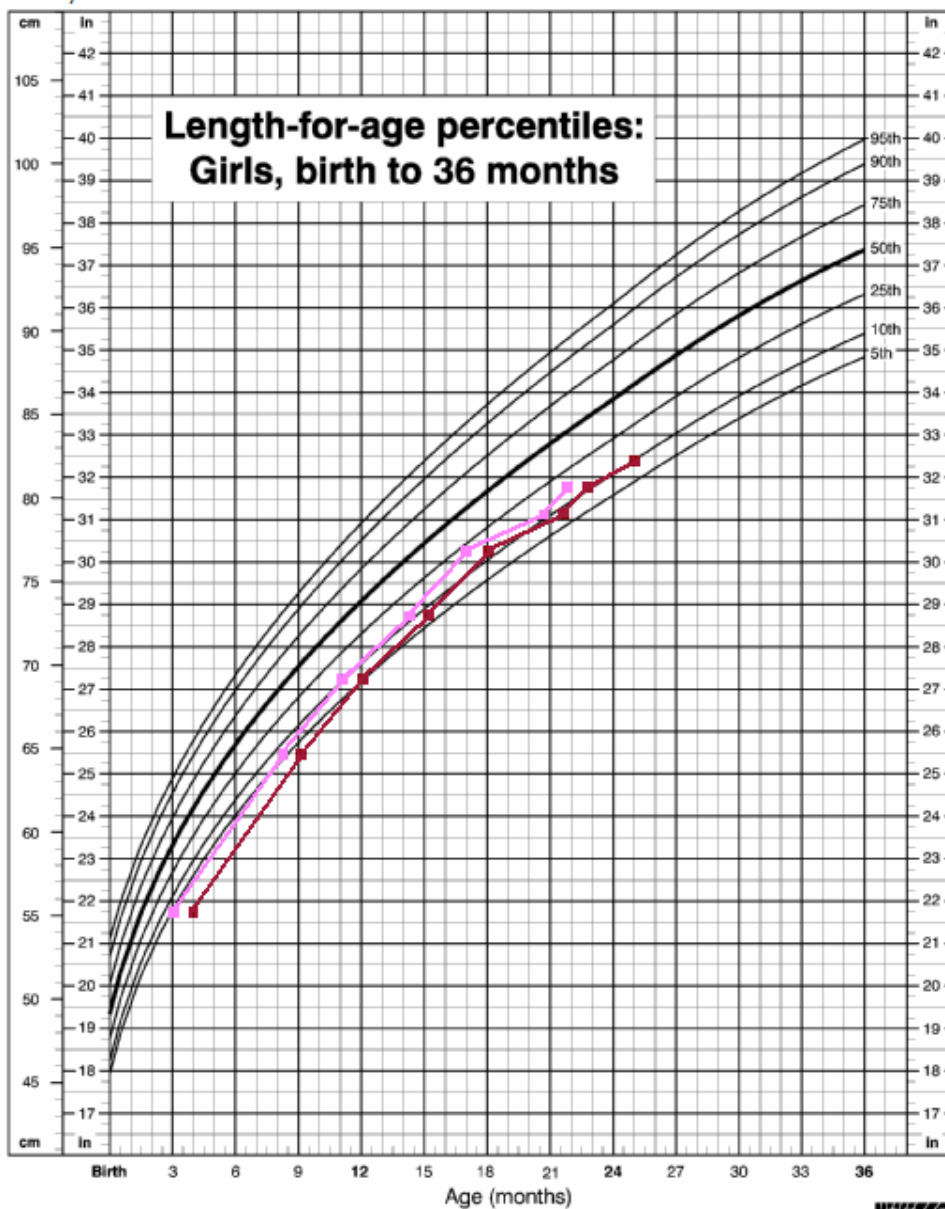
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Site: Emerald CHD

Bell, Victoria T

DOB: 04/10/03



Published May 30, 2000.
SOURCE: Developed by the National Center for Health Statistics in collaboration with
the National Center for Chronic Disease Prevention and Health Promotion (2000).



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4.4 and More...

Points to Share:

- Only measurements taken after their estimated due date (greater than 40 weeks gestation) will plot on the Client Services growth charts.
- Plotting, based on adjusted age, will stop when the child turns 2 years old (chronological age).

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Why Doesn't WIC Use Preterm Growth Charts?

USDA requires WIC to use the 2000 CDC growth charts and plot measurements using adjusted age. However, there are a number of growth charts available for assessing growth of preterm infants, i.e.; Fenton, Babson, Infant Health and Development Program (IHDP).

RDs can use the premature growth charts for assessing an infant or child's growth during the high risk visit. However, risk eligibility for preterm infants and children is based *only* on the 2000 CDC growth charts using adjusted age plots. Nutrition experts agree that the 2000 CDC growth charts whose measurements are plotted for adjusted age are appropriate for assessing growth of the preterm infant as long as the provider continues to plot and assess growth patterns using the same growth chart (i.e. not using a preterm growth chart one time and switching back to the 2000 CDC growth chart the next time).

Additional information is available in:

- Reference and Resource List in the Appendix, and
- the Preterm video - Preterm Infants: Growth Assessment and Feeding by Joan Zerzan, MS, RD, CD – Abbreviated Version"
- Nutrition Practice Care Guidelines for Preterm Infants In the Community- Revised August 2006- reprinted from Oregon State.

Interpreting Growth Using Chronological Age and Adjusted Age

A video presentation, Preterm Infants: Growth Assessment and Feeding by Joan Zerzan, MS, RD, CD – Abbreviated Version" is included for this training. This video shows brief segments of a



4.4 and More...

presentation by Joan Zerzan, provided to a small group of local and state WIC staff in September 2006 in preparation for this training.

The full 3-hour presentation, "Preterm Infants: Growth Assessment and Feeding by Joan Zerzan, MS, RD, CD – Full Version is also available. A handout of the PP slides are only available for the full version of this presentation; not for the abbreviated version.

Many of you may have had the opportunity to participate in one of Joan's sessions at the 2006 State WIC Conference. Joan is a clinical dietitian for the Neonatal Intensive Care Unit at the University of Washington. She has been in this position for the past 18 years, 14 years of those years as a member of the High Risk Infant Follow up Clinic.

Trainer:

Please share the following information prior to showing the first segments of Joan's presentation.

1. Joan uses the term corrected age in the beginning of the presentation versus adjusted age. however, she agreed with the term used by USDA [adjusted age] and also believes that this term is more appropriate.
2. Joan also uses some technical terms that we have tried to clarify within the PP slides, however, you may want to review the DVD prior to the training to determine if there are terms that would be helpful to define. One term to define is the term "morbidity," which means disease or illness.
3. Client photographs shown in the original presentation have been replaced with generic child photographs to protect the clients' privacy.

DVD
VHS

View Preterm Video Segment 1 "Preterm Infants: Growth Assessment and Feeding by Joan Zerzan, MS, RD, CD – Abbreviated Version"

Handouts are *not* available for this video segment.

Ask the audience: What did you find interesting from Joan's information?



4.4 and More...

Point to share:

In assessing and monitoring the nutritional status of a low birth weight infant it is most important to evaluate the *pattern* of measurements obtained over time.

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Risk Factor Changes in Client Services 4.4

Reference: Volume 1, Chapter 14 – Nutrition Risk Criteria

The preterm risk factors listed on the next page are auto calculated.

The premature and adjusted age growth risks will be auto assigned only if the infant's or child's:

- gestational age \leq 37 weeks.
- gestational age has been entered on the Custom tab.
- age is less than two years old (chronological age).

Remember, these new risks will only be assigned when staff press the Identify New Risks button on the Measures tab.

Helpful Tips:

- Since Client Services has not calculated preterm risks for the child before, it is important to enter the gestational age on the child's custom tab up until the child reaches 2 years of age.
- If you recertify an infant to a child, the gestational age will carry forward if it was entered on the infant's Custom tab *prior* to the recertification.



4.4 and More...

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Premature \leq 37 weeks gestation (<2 yrs.)

Like previous versions of Client Services, this risk is automatically assigned for clients born at 37 weeks gestation or less, documented in the Custom tab. In the past, only preterm infants were assigned this risk.

Now in Client Services Version 4.4, preterm infants *and* children up to 2 years old (chronological age) will be assigned this risk. This risk will be auto assigned when the number of weeks gestation entered into the Custom tab is 37 weeks or less.

Assess Risk tab

CI	Income Documentation	Measures	Assess Risk	Topics	Handouts	Referrals	Basic Contact	Notes	Finish									
Client Ali, Ronald K		DOB 09/11/2006		Category I														
Caregiver Ali, Griselda		Age 0 Yrs 1 Mo 0 Days		Gender M														
<input checked="" type="radio"/> Medical <input type="radio"/> Non-Medical		Adjusted Age 0 Yrs 0 Mos 9 Days																
Risk Factors Infant of Pri 1 BF Woman at Nutr Risk Infant of Pri 4 BF Woman at Nutr Risk				<table border="1"> <thead> <tr> <th>Date</th> <th>Note</th> <th>Client's Risks</th> </tr> </thead> <tbody> <tr> <td>10/11/2006</td> <td><input type="checkbox"/></td> <td>Infant of Pri 2 BF Woman at Nutr Risk</td> </tr> <tr> <td>10/11/2006</td> <td><input type="checkbox"/></td> <td>Premature \leq 37 Wks Gestation</td> </tr> </tbody> </table>						Date	Note	Client's Risks	10/11/2006	<input type="checkbox"/>	Infant of Pri 2 BF Woman at Nutr Risk	10/11/2006	<input type="checkbox"/>	Premature \leq 37 Wks Gestation
Date	Note	Client's Risks																
10/11/2006	<input type="checkbox"/>	Infant of Pri 2 BF Woman at Nutr Risk																
10/11/2006	<input type="checkbox"/>	Premature \leq 37 Wks Gestation																

PP
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Very Low Birth Weight \leq 3 pounds 5 ounces (Infants only)

In Client Services 4.4, infants born at 3 pounds 5 ounces or less are assigned this risk factor - Very Low Birth Weight \leq 3 lbs, 5 oz. This risk factor is considered high risk and is automatically assigned based on the birth weight entered on the Custom tab.

This risk is only for infants. Children with very low birth weight are rolled up into the Low Birth Weight < 5#, 8 oz. (< 2 yrs.) risk.

Assess Risk tab

CI	Income Documentation	Measures	Assess Risk	Topics	Handouts	Referrals	Basic Contact	Notes	Finish									
Client Page, Ali V		DOB 05/10/2006		Category I														
Caregiver Page, Linda R		Age 0 Yrs 5 Mos 1 Day		Gender F														
<input checked="" type="radio"/> Medical <input type="radio"/> Non-Medical		Adjusted Age 0 Yrs 1 Mo 18 Days																
Risk Factors Infant of Pri 1 BF Woman at Nutr Risk Infant of Pri 2 BF Woman at Nutr Risk Infant of Pri 4 BF Woman at Nutr Risk				<table border="1"> <thead> <tr> <th>Date</th> <th>Note</th> <th>Client's Risks</th> </tr> </thead> <tbody> <tr> <td>07/20/2006</td> <td><input type="checkbox"/></td> <td>Premature \leq 37 Wks Gestation</td> </tr> <tr> <td>07/20/2006</td> <td><input type="checkbox"/></td> <td>Very Low Birth Weight \leq 3 lbs 5 oz</td> </tr> </tbody> </table>						Date	Note	Client's Risks	07/20/2006	<input type="checkbox"/>	Premature \leq 37 Wks Gestation	07/20/2006	<input type="checkbox"/>	Very Low Birth Weight \leq 3 lbs 5 oz
Date	Note	Client's Risks																
07/20/2006	<input type="checkbox"/>	Premature \leq 37 Wks Gestation																
07/20/2006	<input type="checkbox"/>	Very Low Birth Weight \leq 3 lbs 5 oz																



4.4 and More...

Adjusted Age Determined Risks

PP
Pg 20

The following risks are based on adjusted age for determination:

- Length/Adjusted Age $\leq 5^{\text{th}}$ (< 2 yrs) (chronological)
- Length/Adjusted Age $\leq 10^{\text{th}}$ (< 2 yrs) (chronological)
- Head Circumference/Adjusted Age < 5^{th} (Infants only)

PP

Length/Adjusted Age $\leq 5^{\text{th}}$ (< 2 yrs.)

Length/Adjusted Age $\leq 10^{\text{th}}$ (< 2 yrs.)

For preterm infants and children less than 2 years of chronological age, Client Services plots length measurements using both adjusted age and chronological age on the Length/Age growth chart. When measurements plotted with adjusted age are available, these are the measurements used to determine this risk.



4.4 and More...

PP
Pg 21

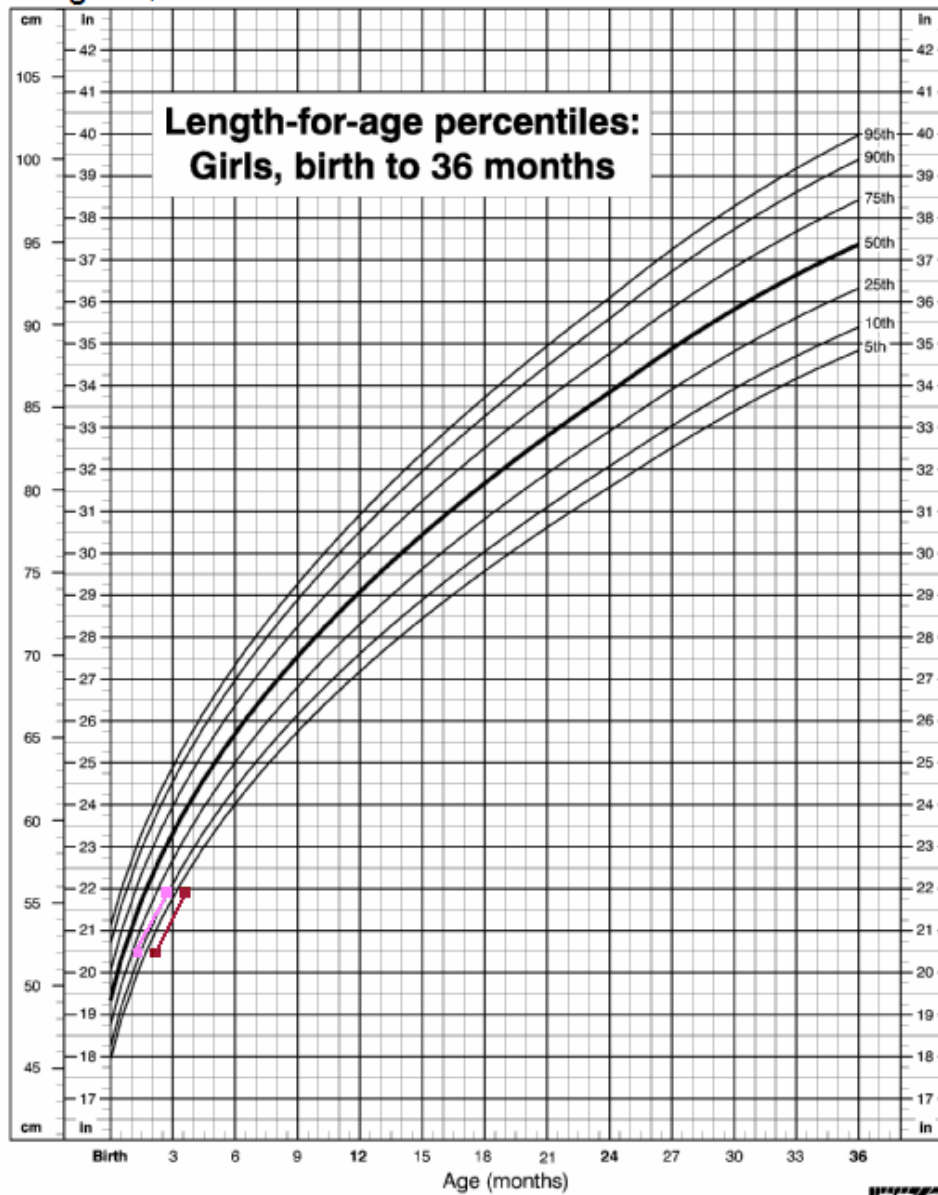
Let's view Julissa's Length/Age Growth Chart Plotted Using Both Ages



Site: Emerald CHD

Langford, Julissa E

DOB: 06/22/06



Published May 30, 2000.
SOURCE: Developed by the National Center for Health Statistics in collaboration with
the National Center for Chronic Disease Prevention and Health Promotion (2000).



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Printed: 12/18/06



4.4 and More...

In Julissa's chart, the chronological age plot (in red) is below the 5th percentile length for age. In the past, a risk would be determined based on this plot; however, the adjusted age plot (in pink) is above the 10th percentile. This client will not be assigned a risk related to her length, however she will be assigned the risk "Premature \leq 37 weeks gestation".

Assess Risk Tab

CI	Income Documentation	Measures	Assess Risk	Topics	Handouts	Referrals	Basic Contact	Notes	Finish							
Client		Langford, Julissa E		DOB		06/22/2006		Category		I						
Caregiver		Langford, Yana L		Age		0 Yrs 3 Mos 19 Days		Gender		F						
<input checked="" type="radio"/> Medical <input type="radio"/> Non-Medical		Adjusted Age		0 Yrs 2 Mos 21 Days												
Risk Factors Infant of Pri 1 BF Woman at Nutr Risk Infant of Pri 2 BF Woman at Nutr Risk Infant of Pri 4 BF Woman at Nutr Risk				<input type="button" value="Include >"/>		<table border="1"> <thead> <tr> <th>Date</th> <th>Note</th> <th>Client's Risks</th> </tr> </thead> <tbody> <tr> <td>06/22/2006</td> <td><input type="checkbox"/></td> <td>Premature \leq 37 Wks Gestation</td> </tr> </tbody> </table>					Date	Note	Client's Risks	06/22/2006	<input type="checkbox"/>	Premature \leq 37 Wks Gestation
Date	Note	Client's Risks														
06/22/2006	<input type="checkbox"/>	Premature \leq 37 Wks Gestation														

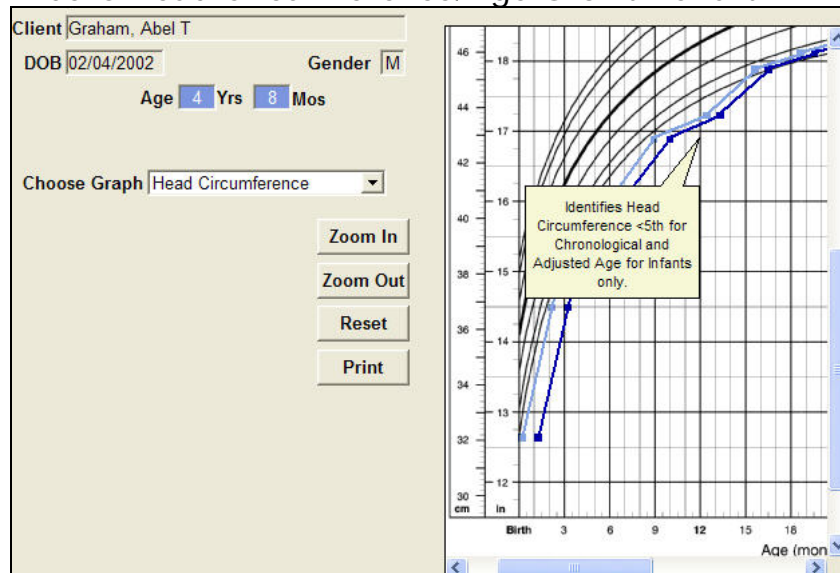
Head Circumference/Adjusted Age <5th (Infants only)

PP
Pg 22

Like length, Client Service plots head circumference measurements on the growth chart by both adjusted age and chronological age for preterm infants (when head circumference is entered). **Note:** Not all clinics take head circumference measurements; it is not required.

PP of
full
growth
chart,
not seg-
ments

Abel's Head Circumference/Age Growth Chart





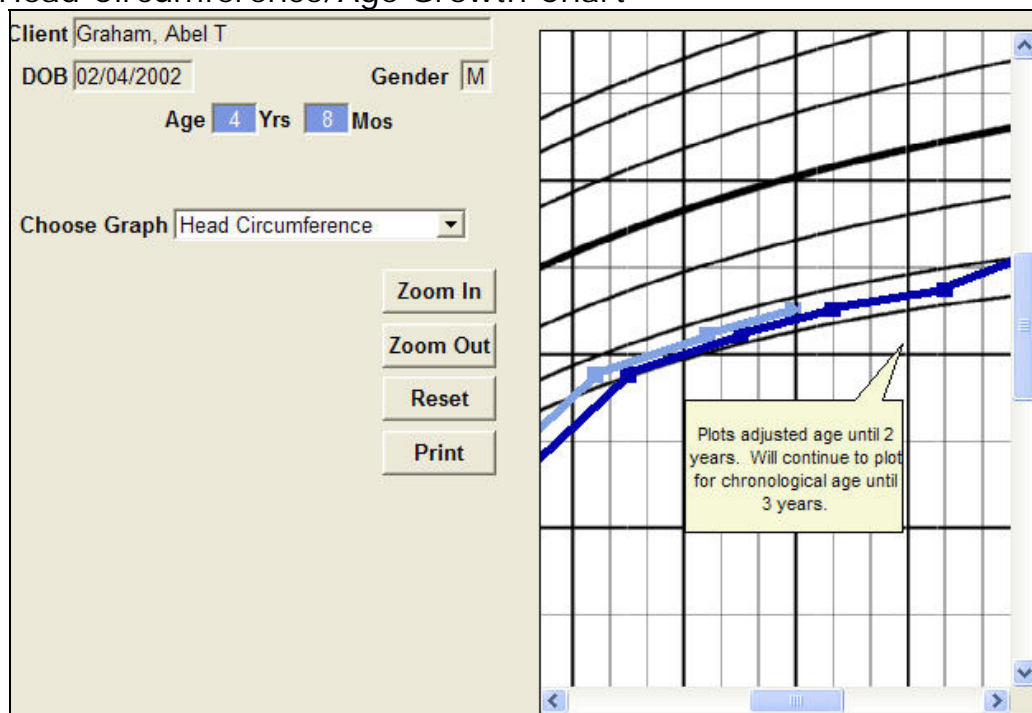
4.4 and More...

Let's review!

PP
Pg 23

- Client Services will use only the adjusted age measurements to determine risk eligibility for preterm infants and children up to 2 years of age (chronological).
- Plotting measurements on the growth chart for the adjusted age will begin once the infant has reached their estimated due date. The graph will continue to plot for both chronological age and adjusted age until age 2 (chronological age). This applies to three growth charts: length/age, weight/age and head circumference/age.
- Plotting head circumference measurements for chronological age will continue up to age 3, as in previous versions of Client Services.

Head Circumference/Age Growth Chart



- PP
- If the infant's adjusted age is a negative number at the time of measurement:
- the growth chart will not plot for adjusted age and
 - Client Services will not assign growth related risks until the infant measurements are plotted on the growth charts; plotting displays once they have reached their estimated due date.



4.4 and More...

Pg 24

The following is a table which provides some clarity to current risks, changed risks, and new risks:

Medical Risks Changes (Based on gestational age, growth and birth weight)

Current Risks	Changed Risks	High Risk
Premature \leq 37 Weeks Gestation (Infants only)	Premature \leq 37 Weeks gestation ($<$ 2 yrs.) (Infants, Children)	
Length/Age \leq 5 th (Infants, Children)	Length/Age \leq 5 th (Infants, Children) Length/Adjusted Age \leq 5 th (Infants, Children $<$ 2 yrs.)	
Length/Age \leq 10 th (Infants, Children)	Length/Age \leq 10 th (Infants, Children) Length/Adjusted Age \leq 10 th (Infants, Children $<$ 2 yrs.)	
Head Circumference/Age $<$ 5 th (Infants only)	Head Circumference/Age $<$ 5 th (Infants only) Head Circumference/Adjusted Age $<$ 5 th (Infants only)	
Weight/Length \leq 5 th		X
Weight/Length \leq 10 th (Infants, Children)		
Weight/Length \geq 95 th (Children 24 – 36 months)		X
	Very Low Birth Weight \leq 3 lb. 5 oz. (Infants only)	X
Low Birth Weight \leq 5 lbs., 8 oz ($<$ 6 mos.)		X
Low Birth Weight \leq 5lbs., 8 oz (\geq 6 mos.)		
Low Birth Weight \leq 5lbs., 8 oz ($<$ 2 yrs.)		

Note: Slow Weight Gain and BMI/Age risks did not change so are not shown.



4.4 and More...

Pg 25

Communication about growth

Caregivers often want to hear about how their child is growing. This is especially true for caregivers with preterm infants who may have more concerns about their child's growth and may need more reassurance.

Remember the intent of sharing growth information with the caregivers is to help them know how their child is growing and if there are any concerns, to be able to address them early.

DVD
VHS

View Preterm Video Segment 2 "Preterm Infants: Growth Assessment and Feeding by Joan Zerzan, MS, RD, CD – Abbreviated Version".

Handouts are not available for this video segment.

Ask staff to share what they found interesting.

Let's take a look at the next page, "Communicating About Growth with Caregivers".

Trainers: Have volunteers read the paragraphs out loud or to themselves.



4.4 and More...

Pg 26

COMMUNICATING ABOUT GROWTH WITH CAREGIVERS:

1. During the WIC visit, you are working to **develop a relationship** with the caregiver so she feels comfortable and develops trust in you as a WIC provider.
 - a) Begin with something **positive and specific** about the child and/or the parent-child interaction. Show that you **really care** about the family.

“You do a great job caring for your baby.” or “You seem comfortable caring for your little one.” or “You are very responsive to your baby’s needs.”
 - b) These **affirmations** can be wonderful rapport builders. For some clients, affirmations are a rare commodity. Be sure that the comments are **genuine and sincere**.
2. **Ask if the parent or others have any concerns with the baby’s growth.**
 - Has anyone been concerned about your child’s growth?
 - Have you been concerned?
 - When did that concern begin?
 - What do you think has contributed to it? (i.e. baby was sick)

Use reflective listening to show you have heard what the client is saying about her or others’ concerns about the baby’s growth. Try to **reflect** her words and meaning (your perceptions) back to her:

“Your mother is concerned about Kayla’s growth.” or “You are worried about Kayla’s growth and not sure if she is growing like she should be growing.”



4.4 and More...

3. **Ask for permission** to share the growth charts with the caregiver.

"Would you like to see how your baby is growing as shown on the growth charts?" or "The computer has plotted your baby's measurements on the growth charts, would you like to see them?"

4. **Provide brief description** of growth interpretation to caregiver.

"For preterm infants/children, the computer plots the length and weight two times: one using your child's **actual age** and one using what we call an **"adjusted age"**. The adjusted age means we have calculated what your child's age would have been had she been full term (that is, was carried the full term of your pregnancy). Have you heard this before?"

"Kayla is 1-1/2 months old today, but because she was born 4 weeks early, her adjusted age is 2 weeks old.

"Although the computer plots her measurements for both ages, the one we want to focus on is for her adjusted age. On the length/age chart, and looking at her length for her adjusted age - Kayla is growing at the 10th percentile. This means out of 100 girls who are 2 weeks old, 90 would be longer than Kayla and 9 would be shorter. "

"However the most important thing is Kayla's **rate of growth**, not the percentile. So each time we measure and weigh Kayla at WIC, we will be looking at her rate of growth to ensure she is growing well. Now let's look at her weight for age...."

5. After sharing information about the three growth charts (length/age, weight/age and weight/length), **ask "what questions do you have?"**



4.4 and More...

PP
Pg 28

Communication Activity:

- Find a partner
- Use the growth chart for Victoria or Julissa (on the following pages)

One of you is the caregiver and one is the WIC certifier.

Taking into account all the information you have just seen and heard, this activity is to help you establish rapport and explain the growth chart to the caregiver.

We will switch roles in about 5 minutes.

Trainer:

After each person has had the opportunity to do the activity, ask the audience:

Who would like to share about your experience with this activity?



4.4 and More...

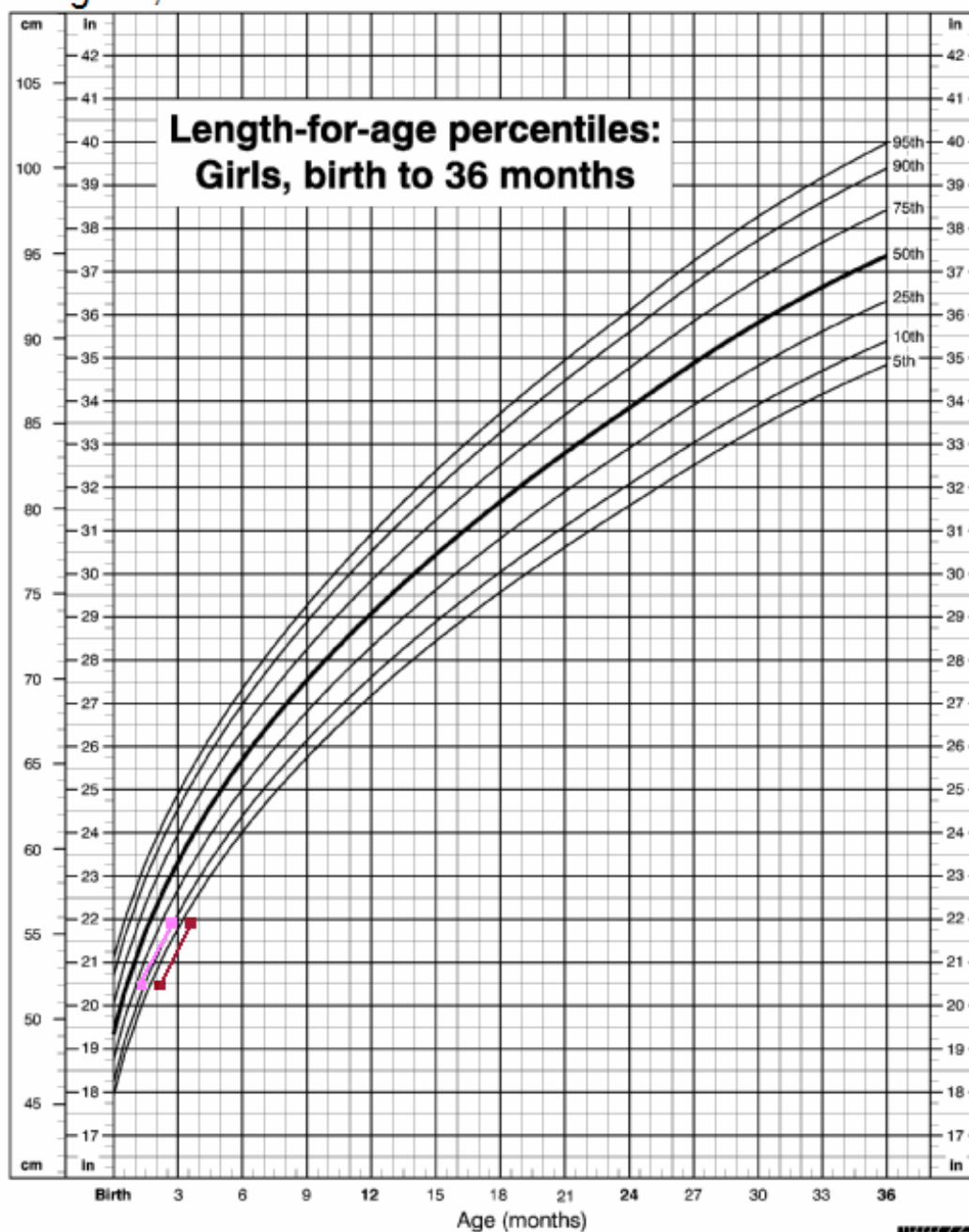
Pg 29



Site: Emerald CHD

Langford, Julissa E

DOB: 06/22/06



Published May 30, 2000.

SOURCE: Developed by the National Center for Health Statistics in collaboration with the National Center for Chronic Disease Prevention and Health Promotion (2000).



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4.4 and More...

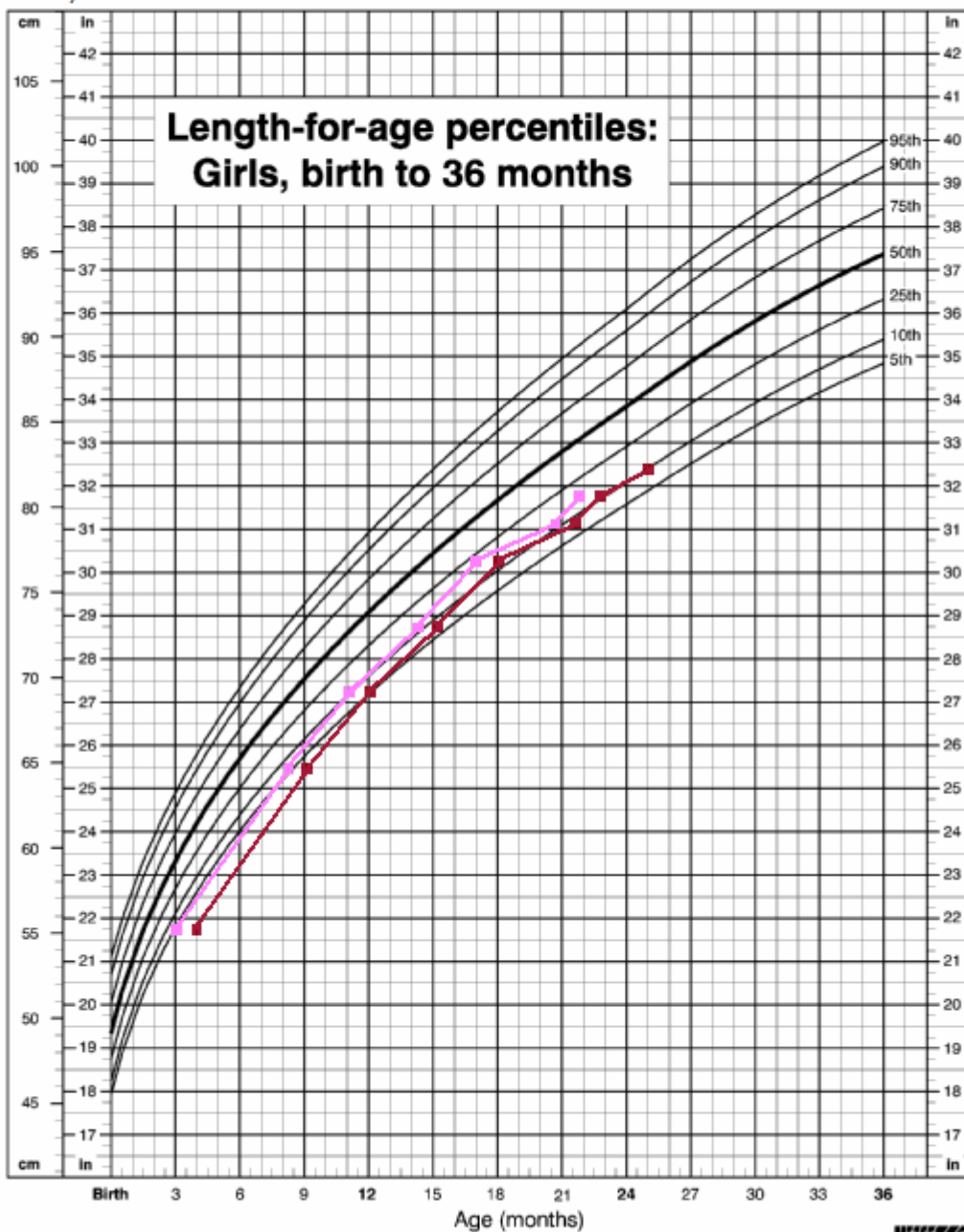
Pg 30



Site: Emerald CHD

Bell, Victoria T

DOB: 04/10/03



Published May 30, 2000.

SOURCE: Developed by the National Center for Health Statistics in collaboration with the National Center for Chronic Disease Prevention and Health Promotion (2000).



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4.4 and More...

Pg 31

AND MORE... (Other Changes in Client Services 4.4)

This is the "and more" part to the 4.4 and More Training

Trainer: You may choose to have the trainees cover these sections on their own or at a later date if time is limited.

Certification Encounter, Certification History and High Risk Care Plan Reports

PP

Let's take a look at the anthropometric table in the Client Services Certification Encounter Report, which will also look the same for the Certification History and HRCP Report.

Objective:

Male
DOB: 08/04/2005
Age At Certification: 11 months 13 days
Gestational Age: 37 wks
Adjusted Age at Certification: 10 months 22 days

Birth Weight: 6 lbs 9 ozs
Birth Length: 18 0/8 in
Breastfeeding: Stopped
Date Stopped BF: 1/5/2006

Date of Measure	Length / Height	Ln / Age %ile	Ln / Adj Age %ile	Weight	Wt / Age %ile	Wt / Adj Age %ile	Wt / Ln %ile	BMI	BMI / Age %ile	Hct %	Hgb g/dl
07/17/2006	L 28 2/8 in	13.47%	21.28%	21 #12 oz	40.36%	48.34%	89.97%				11.0

PP

Rules for Adjusted Age in Reports

The following rules apply for the Certification Encounter Report, the Certification History Report and the High Risk Care Plan Report:

PP

- If either age (chronological or adjusted) is zero (for year, month, and day), the field will say Birth in the Certification's Objective section.

Custom Tab

CI	Income Documentation	Measures	Assess Risk	Topics	Handouts	Referrals	Basic Contact	Notes	Finish		
Client		Schroeder, Ricky L		DOB		10/11/2006		Category		I	
Caregiver		Schroeder, Angelica C		Age		0 Yrs	0 Mos	0 Days	Gender		M
				Adjusted Age		0 Yrs	-1 Mos	-4 Days			
				Date Service Provided		10/11/2006					



4.4 and More...

Pg 32

Report shows:

Client:	Schroeder, Ricky L.
Caregiver:	Schroeder, Angelica C
Address:	12800 Park Avenue, Apt 113 Lacey, WA 98503
Phone:	(360) 555-1234
Msg Phone:	(555) 123-4
Med Provider:	
Objective:	
	Male
	DOB: 10/11/2006
	Age At Certification: Birth
	Gestational Age: 35 wks
	Adjusted Age at Certification: -1 month -4 days

PP

- If the adjusted age at the Certification shows negative numbers, the negative age will display for Adjusted Age at Certification in the Objective section.

Objective:

Male	Birth Weight: 4 lbs 3 ozs
DOB: 08/02/2006	Birth Length: 17 1/8 in
Age At Certification: 30 days	Breastfeeding: Currently
Gestational Age: 31 wks	Date Stopped BF:
Adjusted Age at Certification: -1 month -3 days	Date Form/Milk Began:
	Date Solids Began:

Date of Measure	Length / Height	Ln / Age %ile	Ln / Adj Age %ile	Weight	Wt / Age %ile	Wt / Adj Age %ile	Wt / Ln %ile	BMI	BMI / Age %ile	Hct %	Hgb g/dl
09/01/2006	L 18 3/8 in	0.04%	N/A	5 # 2 oz	0.11%	N/A	19.98%				
08/02/2006	L 17 1/8 in	0.82%	N/A	4 # 3 oz	0.73%	N/A					

PP

The adjusted age percentages in the table will say "N/A" (not applicable) when:

- the adjusted age is negative at the time of the measurement.
- the infant is born over 37 weeks gestation (i.e. is full term).
- the child is over 2 years old or more at the time of certification.



4.4 and More...

NOTE: If the last measurement is taken before 2 years of age, the adjusted age percentiles will show in the table for the report and will continue to show until another measurement is documented, even if the child is over two years old.

Child's Custom Tab-Breastfeeding Information

PP
Pg 33

The Breastfed status and the Date BF Stopped on the infant's Custom tab will now carry forward to the child's Custom tab when the infant is recertified to a child. Breastfeeding data is taken from these fields for the breastfeeding report. The report data will only be as good as the information that is entered into Client Services, so be sure to complete these fields.

PP

Infant Custom Tab

Birth Length	20 in 0 8ths	Birth Weight	8 lb 9 oz	Gestational Age	41 wks
Total Preg.Wt. Gain		On WIC During Preg?	WA	Mom's ID	115017068
Breastfed	Stopped	Date BF Stopped	05/29/2006		
		Date Formula/Milk Introduced	10/10/2005		
		Date Solids Introduced	03/30/2006		
Infant Medical Provider		Dr. Allcome			

Child Custom Tab

Birth Length	20 in 0 8ths	Birth Weight	8 lb 9 oz	Gestational Age	41 wks
Breastfed	Stopped	Date BF Stopped	05/29/2006		



4.4 and More...

PP
Pg 34

Estimated Weeks of Gestation

PP

The Measures tab for the pregnant woman now shows the Estimated Weeks Gestation. This field is a display only and cannot be edited. The weeks are calculated by using the information entered into the Due Date on the Custom tab for the pregnant woman. If you change the due date, the Est. Weeks Gestation will update once the wizard is closed. Go to Change Cert, make the change before entering the wizard of choice.

Measures tab

CI	Income Documentation	Measures	Assess Risk	Topics	Handouts	Referrals	Basic Contact	Notes	Finish
Client Jannisk, Imelda R		Age 29 Yrs		Category PG					
Pre-Pregnancy Wt 200		Pre-Pregnancy BMI 31.9		Est. Weeks Gestation 24					
Date	Height In 8ths	Weight Lb Oz		Note				New Line	
07/25/2006	66 3	230 0						Delete Line	

Note:

If the woman's due date is today, the Est Weeks Gestation will show as "40". If the due date was yesterday, the Est Weeks Gestation will show "N/A" (not applicable); so once the due date has passed, the Est. Weeks Gestation will continue to show "N/A".

A table resides in the HRCP Report which identifies the weeks of gestation.

PP

OBJECTIVE

Age at HRCP: 24

Pre-Pregnancy Weight: 135 lbs 0 oz

Pre-Pregnancy BMI: 21.6

Height: 66 2/8 in. taken 03/20/2006
(used for computing Pre-Pregnancy BMI)

Date of Measure	Weight	Weight Gain	Weeks Gestation	Hct %	Hgb g/dl
04/18/2006	150 lbs 0 oz	15 lbs	12		
03/20/2006	143 lbs 0 oz	8 lbs	8		14.2

Meds: ☒ PN Vitamins ☐ Iron ☐ Minerals ☐ Other

Meds Note:

Diet Assessment Done: ☐ No ☐ Yes



4.4 and More...

Prenatal Weight Gain Grid

PP
Pg 35

A table added to the pregnant woman's weight gain grid was requested by local staff who work closely with the Maternity Support Service (MSS) Program. The table now displays the date the weight was taken, the weight, and a space for staff signature where the graph is printed. The table will only display a maximum of five weights. If you have more than five, the table will be blank. However, the plotting on the weight gain grid will continue to be available to view and print.



4.4 and More...

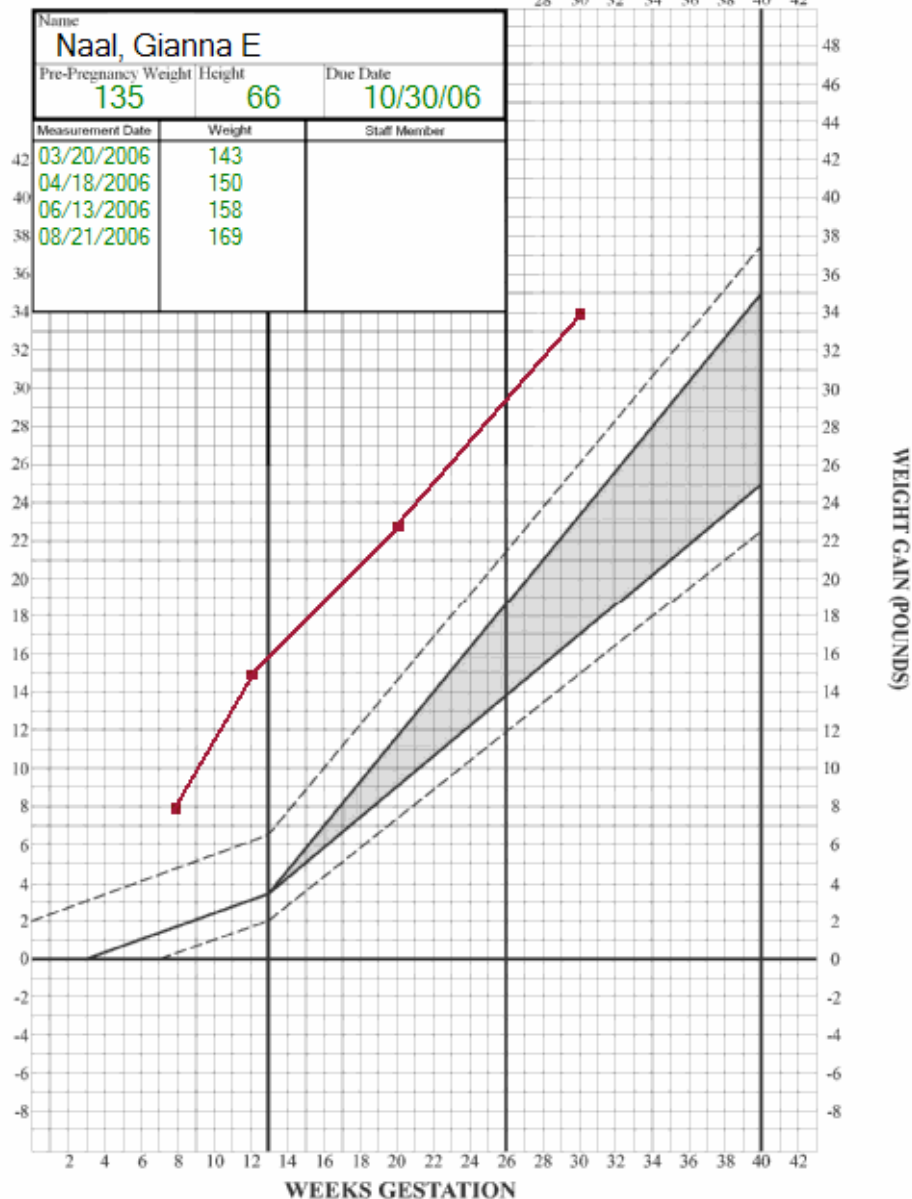
PP
Pg 36

Let's view Gianna's Prenatal Weight Gain Grid



PRENATAL WEIGHT GAIN GRID BMI 19.8 - 26.0

Site: Emerald CHD



Adapted from Nutrition During Pregnancy, Institute of Medicine, 1990, and the Oregon Department of Human Services, WIC Program.

Printed: 10/14/06



4.4 and More...

Pg 37

Recertifying the Woman

A bug in Client Services caused information to carry forward from a previous certification, making the recertification information inaccurate. The following scenario provides an example of when this might happen.

A pregnant woman on your WIC program transfers out of your clinic, but returns a year later. During the year she was away, she miscarried the baby she was carrying when she was originally on your program and, she has since had another baby. She is back in your office today to be put on the program as BF. In previous versions, some information from the first pregnancy would transfer to the BF certification, even though that information was not related to her current infant.

A new pop-up message will squash that bug.

PP

Now, recertifying a woman for breastfeeding or postpartum will carry forward relevant information (pre-pregnancy weights and select risks) depending on how you respond to the new pop-up message.



4.4 and More...

Pg 38

Pregnant to Breastfeeding/PP

Please follow the sequence of events:

Amber was due on 8-13-06 (Custom Tab)

CI	Income Documentation	Measures	Assess Risk	Topics	Handouts	Referrals	Basic Contact	Notes	Finish
Client	Acosta, Amber F			DOB	11/30/1977		Category	PG	
Caregiver	Acosta, Amber F			Age	28 Yrs		Gender	F	
Date Service Provided				10/13/2006					
Due Date				08/13/2006					

PP

If this is Amber's first BF or PP recert following her PG certification, you will receive a pop-up message; how you respond will affect what data Client Services carries forward.

PP

Same Pregnancy?

Is this BF Certification for the pregnancy with a due date of Aug 13, 2006?

Yes No

PP

If you select "Yes" then:

- the pre-pregnancy weight will carry forward from the PG Certification
- the following risk factors will carry forward to the new BF certification if they were assigned in the previous PG certification (for this pregnancy):
 - Multiple fetuses
 - Gestational Diabetes
 - 2 Preg/2 Years
 - ≤ 17 Years at Conception



4.4 and More...

PP
Pg 39

If you select “No” it means:

- you are recertifying this woman based on a different pregnancy.
- no data will be brought forward from a previous certification.

Note: If you begin an RC in Process, you will be unable to leave the Custom tab until the delivery date field is completed. If front-line staff normally begin the certification, then have them go only as far as the entering the income. The RC in Process will require a delivery date before finishing.



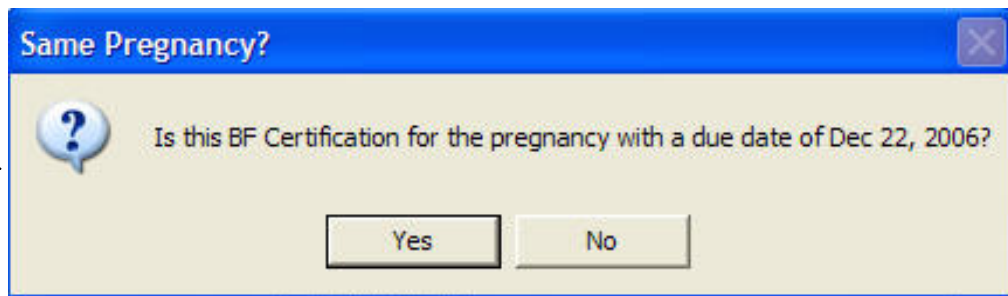
4.4 and More...

Pg 40

Breastfeeding to Breastfeeding

If a BF woman is being recertified for a second BF recert, you will receive a pop-up message. How you respond, will effect what Client Services will complete for you.

PP



If you select "Yes" then:

- the delivery date, the pre-pregnancy weight and the weight gained during pregnancy will automatically fill using the previous BF certification information.
- the following BF risk factors from the previous BF certification will carry forward if they had been assigned for the client:
 - Multiple fetuses
 - Gestational Diabetes
 - 2 Preg/2 Years
 - ≤ 17 Years at Conception
 - High Weight Gain (This preg.)

PP

If you select "No" it means:

- you are recertifying this woman based on a different pregnancy.
- no data will be brought forward from a previous certification.

There is still more in 4.4...but you need to read the Client Services 4.4 Release Notes to pick up a few other improvements to Client Services, such as WIC Mail can now be printed.

PP

What questions do you have?



APPENDIX



4.4 and More...

Pg 42

Accurate Weighing and Measuring Procedures

It cannot be emphasized enough the importance of obtaining accurate measurements for every child, but it is especially important for the preterm infant/child.

For anthropometric measurements to be valid indices of growth status in the preterm infant, they must be highly accurate, requiring precision in the measuring technique. In the assessment of this population one ounce or a $\frac{1}{4}$ of an inch makes a big difference.

So with any skill, it is good to step back and “re-evaluate” the techniques used when weighing and measuring infants and children and even re-assess the equipment used in our clinics. New anthropometric policy changes were provided in a memo in 2003, but have not come out in policy format until now in Volume 1, Chapter 9 – Anthropometrics, pgs.12 – 15.

Let's spend a few minutes to review those changes:

For Infants and Children, Birth – 24 months of age:

- May weigh with dry diaper and/or underclothes
- Still have option to undress completely; may be appropriate for more fragile infants/children to obtain better assessments.

For Older Kids, 2-5 years of age:

- May weigh with dry diaper (2-3 years old)
- Weigh in underclothes and/or light clothing

Balance privacy needs and accurate measurements!



4.4 and More...

So along with these policy changes, this may be a good time to review weighing and measuring practices within your clinics.

- Volume 1, Chapter 9 - Anthropometrics,
- Volume 1, Chapter 18 – Certification Issues, page 11 provides direction for what to do when a child, who is medically fragile, is unable to be present for measurements.
- The HRSA (Health Resources Services Administration) provides an on-line training modules at <http://depts.washington.edu/growth/>
- Evaluate clinic weighing and measuring equipment and talk to your Local Program Consultant if new equipment is needed.
- Assure equipment is accurately calibrated, is in good condition or even that all sites have the proper equipment.



4.4 and More...

Pg 43

RD Wizard Changes with Client Services 4.4

O Tab

Fields were added for the adjusted age percentiles and will display the percentiles if the child is preterm and the measurement was taken when the child was under two years old.

PP

Premature, under 2 years, with measurements

HRCP: O Tab

RD C	S	Measures	O	A:Risk	A	P	I:Topics	I:Handouts	I:Referrals	E	Notes	Finish			
Client		Keller, Francisco E		DOB		04/22/2005		Category		C					
Caregiver		Barnett, Janelle E		Age		1 Yr 5 Mos 10 Days		Gender		M					
				Adjusted Age		1 Yr 3 Mos 29 Days									
10/02/2006		Length		31 in 4 8ths		Ln/Age		34.46 %		51.33 %		Weight/Length		77.96 %	
		Weight		25 lbs 4 oz		Wt/Age		45.74 %		54.64 %					
05/30/2006		Hgb		11.7		Gestational Age		34							

The adjusted age percentiles field displays N/A on the O Tab for the HRCP if the child is:

- under 2 years of age, and born over 37 weeks gestation.
- over 2 years of age.

PP

Pg 44

Premature, over 2, with NA showing

HRCP O Tab

RD C	S	Measures	O	A:Risk	A	P	I:Topics	I:Handouts	I:Referrals	E	Notes	Finish			
Client		Bartlett, Malachi T		DOB		08/14/2004		Category		C					
Caregiver		Abrahamson, Lilia L		Age		2 Yrs 1 Mo		Gender		M					
08/15/2006		Height		34 in 4 8ths		Ht/Age		62.93 %		N/A %		BMI		17.7 78.21 %	
		Weight		30 lbs 0 oz		Wt/Age		74.27 %		N/A %					
		Hct/Hgb				Gestational Age		37							



4.4 and More...

PP
Pg 44

Premature, over 2, last measurement taken before 2 yrs, no additional measurements taken

HRCP List	RD C	S	Measures	O	A:Risk	A	P	I:Topics	I:Handouts	I:Referrals	E	Notes		
Client	Chan, Ian A				DOB	07/06/2004			Category	C				
Caregiver	Butler, Elisabeth L				Age	2	Yrs	3	Mos	Gender	M			
05/30/2006	Length	33	in	2	8ths	Ln/Age	30.40	%	Adj. Age	38.49	%	Weight/Length	4.62	%
	Weight	23	lbs	0	oz	Wt/Age	4.50	%		5.59	%			
05/30/2006	Hgb	11.1				Gestational Age	36							

If the child is preterm and the measurement was taken when the child was under 2, the measurement will display until the next measures are taken.



4.4 and More...

HRCP History & Report

The HRCP Report:

Display the percentiles if:

- the child is preterm *and*
- the measurement was taken when the child was under two years old.

PP
Pg 45

OBJECTIVE											
Age at HRCP: 1 year 6 months											
Gestational Age: 37											
Adjusted Age at HRCP: 1 year 5 months 9 days											
Birth Length: 19 0/8 in.											
Birth Weight: 6 lbs 14 oz											
Date of Measure	Length / Height	Ln / Age %ile	Ln / Adj Age %ile	Weight	Wt / Age %ile	Wt / Adj Age %ile	Wt / Ln %ile	BMI	BMI / Age %ile	Hct %	Hgb g/dl
10/11/2006	L 32 0/8 in	42.06%	50.55%	27 # 0 oz	65.92%	69.68%	89.80%				
04/05/2006	L 29 6/8 in	53.78%	65.28%	24 # 14 oz	80.49%	85.30%	95.81%				12.2

PP

Displays N/A if the child:

- is under 2 years of age, and not preterm.
- is over 2 years of age.

OBJECTIVE											
Age at HRCP: 2 years											
Gestational Age: 37											
Adjusted Age at HRCP:											
Birth Length: 19 0/8 in.											
Birth Weight: 6 lbs 14 oz											
Date of Measure	Length / Height	Ln / Age %ile	Ln / Adj Age %ile	Weight	Wt / Age %ile	Wt / Adj Age %ile	Wt / Ln %ile	BMI	BMI / Age %ile	Hct %	Hgb g/dl
04/11/2007	L 35 2/8 in	74.18%	N/A	31 # 1 oz	83.42%	N/A	86.22%				
10/11/2006	L 32 0/8 in	42.06%	N/A	27 # 0 oz	65.92%	N/A	89.80%				
04/05/2006	L 29 6/8 in	53.78%	N/A	24 # 14 oz	80.49%	N/A	95.81%				12.2



4.4 and More...

REFERENCE & RESOURCE LIST

Head Circumference Tapes –

Perspective Enterprises circumference measuring tapes with insertion slots maintain circular shape and facilitate measuring head and limb circumference. Re-usable plastic - clean with alcohol.
Measure to 22" x 1/16" - 56 cm x 1 mm.

Order from:
Perspective Enterprises
7829 Sprinkle Road.
Portage, MI 49002

Phone: (269) 327-0869
Toll-Free: (800) 323-7452
Fax: (269) 327-0837
<http://www.perspectiveent.com/>

pepdc@perspectiveent.com

WEBSITES

Children with Special Health Care Needs

<http://www.cshcn.org/news/news.cfm>

HRSA (Health Resources Services Administration) Growth Charts Training

<http://depts.washington.edu/growth/>

Gaining & Growing: Growth Grids for Preterm Infants

<http://depts.washington.edu/growing/Assess/Grgrids.htm>



4.4 and More...

REFERENCE BOOKS & TOOLS

Feeding and Nutrition for the Child with Special Needs by
Marsha Dunn Klein, M.Ed., OTR/L and Tracy A. Delaney, Ph.D., RD
(Order from the DOH Warehouse)

Specific chapters related to the preterm infant:

- Growth and Nutrition Requirements for the Premature Baby (page 427)
- Breast-Feeding Your Premature Baby (429)
The Premature Baby at Home: Stress Factors and Feeding (page 433)
- The Premature Baby at Home: Feeding Positions (page 435)
- The Premature Baby at Home: Special Help for Sucking (page 437)
- The Premature Baby at Home: Helping Your Baby Transition to Different Food Textures (page 441)

Nutrition Interventions for Children with Special Health Care Needs

(Order from the DOH Warehouse)

Specific chapter related to the preterm infant:

- Nutrition Interventions for the Premature Infant After Discharge by Joan Zerzan, MS, RD, CD



4.4 and More...

References Related to Preterm Infants **Provided by Joan Zerzan, RD, MS, CD**

Hospital Discharge Guidelines

Hospital Discharge of the High Risk Neonate Proposed Guidelines (AAP)
(From Pediatrics Vol 102 #2 1998)

Growth Studies of Preterm Infants

Alexander et al, ***US Reference for Fetal Growth, Obstetrics and Gynecology***, Vol. 87, No 2, Feb 1996, pg 164.

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Nelson et al Weight gain of Breast fed vs. bottle fed infants: 8-112
days of age (g/d) Early Human Development 19:223 1989

Bone Mineralization in the Preterm Infant

SA Abrams, Bone Mineralization in former very low birth weight infants
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Gary M Chan et al, Growth and bone mineral status of discharged very
low birth weight infants fed different formulas or human milk, J Pediatr
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NJ Bishop et al, Early diet of preterm infants and bone mineralization
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Recommendations for Growth References for VLBW Infants

Sherry et al Pediatrics Vol111 #4 April 2003

Feeding Studies in Preterm Infants after Discharge

Ernst et al, Growth Outcome and Feeding Practices of VLBW infants
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Lucas et al, Randomized trial of nutrition for preterm infants after
discharge, Arch Dis Child, 67:324-27, 1992

Friel et al, Improved Growth of Very Low Birth weight infants, Nutr
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Bishop et al, Increased bone mineral content of preterm infants fed a nutrient enriched formula after discharge from hospital, *Arch Dis Child*, 68: 573-78, 1993

Chan et al, Effects of human milk or formula feeding on the growth, behavior, and protein status of preterm infants discharged from the newborn intensive care unit, *Am J Clin Nutr*, 60: 710-16, 1994

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